

**Final Modification of General National Pollutant Discharge Elimination System (NPDES)  
Permit No. CAG280000 for Offshore Oil and Gas Exploration, Development and  
Production Facilities in Federal Waters off Southern California**

For reasons set forth in the fact sheet, EPA has made the following modifications to the general permit for offshore oil and gas facilities. These modifications will be effective on November 30, 2009.

Dated: November 24, 2009

/s/

---

Alexis Strauss  
Director, Water Division, EPA Region 9

**1. Addition of Appendix C for Produced Water Discharges**

EPA has modified the general permit to include a new Appendix C that describes new effluent limitations, monitoring requirements and reporting requirements for produced water discharges. Requirements are specified on a platform-by-platform basis. Appendix C is attached to this final permit modification. Part II.B.1.f.1 of the existing general permit is deleted (including Tables 5 and 6) since these requirements only applied during the period of the reasonable potential study. Part II.B.6.a is modified to include the following additional statement requiring compliance with the new Appendix C: "In addition, permittees of platforms listed in Appendix C must comply with the effluent limitations, monitoring requirements and reporting requirements specific to their platform(s)."

**2. Addition of Appendix D for Cooling Water and Fire Control System Test Water Discharges**

EPA has modified the general permit to include a new Appendix D that describes new effluent limitations, monitoring requirements and reporting requirements for discharges of chlorine in cooling water and fire control system test water. Requirements are specified on a platform-by-platform basis. Appendix D is attached to this final permit modification. For consistency with the new Appendix D, the following changes are included in the existing general permit:

a) In Table 12, the words "monitor only" for chlorine are deleted since the reasonable potential period of the permit is over. Also, the words "same as Part II.B.1.b.2" for produced water are deleted and replaced with "once/quarter."

b) Part II.F.4 is replaced with the following:

“4. Chlorine. Discharges of fire control system test water, noncontact cooling water, and/or hydrotest water, to which chlorine has been added, must comply with the discharge limitations, monitoring requirements and reporting requirements contained in Appendix D. For any platform not listed in Appendix D that desires to commence the addition of chlorine to any of the above waste types, monthly chlorine monitoring must be conducted for 12 months and those data provided to EPA for reasonable potential evaluation. If reasonable potential for exceedance of EPA water quality criteria for chlorine is determined to be present, EPA will reopen and modify this permit to establish additional effluent limits and monitoring requirements for chlorine based on the submitted monitoring results.”

### **3. Modification of Water Quality Criterion for Undissociated Sulfide**

The water quality criterion for undissociated sulfide in produced water discharges in Table 4 of the general permit is modified from 2.0 ug/l to 5.79 ug/l.

Footnote #5 to Table 4 of the general permit is modified to include the following additional paragraph:

“In determining the undissociated sulfide concentration, the permittee may use the measured concentration of total sulfide or dissolved sulfide in the produced water sample.”

### **4. Compliance Schedule for Effluent Limitations and Monitoring Requirements for Undissociated Sulfide**

Compliance with the effluent limitations and monitoring requirements for undissociated sulfide set forth in Appendix C below shall be achieved not later than one year following the effective date of this permit modification.

### **5. Decay Factor for Undissociated Sulfide in Produced Water**

Footnote #5 to Table 4 of the general permit is modified to include the following additional paragraph:

“For produced water discharges, a permittee may request that this permit be modified to include a decay factor in making compliance determinations for undissociated sulfide at the edge of the mixing zone. Such a request shall be accompanied by the results of a study of the decay of undissociated sulfide in produced water discharged in southern California Federal waters. Upon receipt of the study by Region 9, this permit may be reopened and modified to include a decay factor in making compliance determinations for undissociated sulfide at the edge of the mixing zone.”

## Appendix C - Platform Specific Requirements for Produced Water

The effluent limitations in the following tables are applicable following initial dilution in the mixing zone defined in Part V of the general permit. Compliance with the limits shall be calculated in accordance with Appendix A of the general permit.

For each platform, the quarterly monitoring requirements below shall commence in the first full monitoring quarter for the platform, subsequent to November 30, 2009, as set forth in Part III.C of the general permit.

**Table C-1 - Requirements for Platform A**

Constituent	Maximum Daily Limit	Average Monthly Limit	Measurement Frequency	Sample Type	Reported Values
Copper	0.00285 mg/l	0.0025 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (a) Pyrene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (b) Fluoranthene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (k) Fluoranthene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave

**Table C-2 - Requirements for Platform B**

Constituent	Maximum Daily Limit	Average Monthly Limit	Measurement Frequency	Sample Type	Reported Values
Benzo (a) Pyrene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (k) Fluoranthene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (b) Fluoranthene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave

**Table C-3 - Requirements for Platform Edith**

Constituent	Maximum Daily Limit	Average Monthly Limit	Measurement Frequency	Sample Type	Reported Values
-------------	---------------------	-----------------------	-----------------------	-------------	-----------------

Zinc	0.0783 mg/l	0.0267 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
------	-------------	-------------	--------------	------	---------------------------

**Table C-4 - Requirements for Platform Elly**

Constituent	Maximum Daily Limit	Average Monthly Limit	Measurement Frequency	Sample Type	Reported Values
Zinc	0.064 mg/l	0.024 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave

**Table C-5 - Requirements for Platform Gail**

Constituent	Maximum Daily Limit	Average Monthly Limit	Measurement Frequency	Sample Type	Reported Values
Benzene	0.0258 mg/l	0.0059 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (a) Pyrene	0.0000257 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Undissociated Sulfide	0.00579 mg/l	0.00155 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave

**Table C-6 - Requirements for Platform Gilda**

Constituent	Maximum Daily Limit	Average Monthly Limit	Measurement Frequency	Sample Type	Reported Values
Copper	0.00392 mg/l	0.00262 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (a) Anthracene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (a) Pyrene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (k) Fluoranthene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (b) Fluoranthene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Chrysene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave

Dibenzo (a,h) Anthracene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Undissociated Sulfide	0.00579 mg/l	0.00197 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave

**Table C-7 - Requirements for Platform Gina**

Constituent	Maximum Daily Limit	Average Monthly Limit	Measurement Frequency	Sample Type	Reported Values
Ammonia	1.23 mg/l	0.459 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Copper	0.00368 mg/l	0.00251 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (a) Pyrene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (k) Fluoranthene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (b) Fluoranthene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave

**Table C-8 - Requirements for Platform Habitat**

Constituent	Maximum Daily Limit	Average Monthly Limit	Measurement Frequency	Sample Type	Reported Values
Copper	0.00292 mg/l	0.00246 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzene	0.015 mg/l	0.0059 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (a) Pyrene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (k) Fluoranthene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (b) Fluoranthene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Dibenzo (a,h) Anthracene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave

Undissociated Sulfide	0.00569 mg/l	0.00125 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
-----------------------	--------------	--------------	--------------	------	---------------------------

**Table C-9 - Requirements for Platform Harvest**

Constituent	Maximum Daily Limit	Average Monthly Limit	Measurement Frequency	Sample Type	Reported Values
Ammonia	0.799 mg/l	0.551 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Copper	0.00335 mg/l	0.00251 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzene	0.019 mg/l	0.0059 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (a) Anthracene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (a) Pyrene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (k) Fluoranthene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (b) Fluoranthene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Chrysene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Dibenzo (a,h) Anthracene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Undissociated Sulfide	0.00578 mg/l	0.00393 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave

**Table C-10 - Requirements for Platform Hermosa**

Constituent	Maximum Daily Limit	Average Monthly Limit	Measurement Frequency	Sample Type	Reported Values
Copper	0.00336 mg/l	0.00237 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzene	0.0119 mg/l	0.0059 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave

Benzo (a) Anthracene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (a) Pyrene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (k) Fluoranthene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (b) Fluoranthene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Chrysene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Dibenzo (a,h) Anthracene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Undissociated Sulfide	0.00578 mg/l	0.00448 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave

**Table C-11 - Requirements for Platform Hidalgo**

Constituent	Maximum Daily Limit	Average Monthly Limit	Measurement Frequency	Sample Type	Reported Values
Benzene	0.019 mg/l	0.0059 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (k) Fluoranthene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (b) Fluoranthene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Chrysene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Undissociated Sulfide	0.00579 mg/l	0.00409 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave

**Table C-12 - Requirements for Platform Hillhouse**

Constituent	Maximum Daily Limit	Average Monthly Limit	Measurement Frequency	Sample Type	Reported Values
Benzo (a) Anthracene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave

Benzo (a) Pyrene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (k) Fluoranthene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (b) Fluoranthene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Chrysene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Dibenzo (a,h) Anthracene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave

**Table C-13 - Requirements for Platform Hogan**

Constituent	Maximum Daily Limit	Average Monthly Limit	Measurement Frequency	Sample Type	Reported Values
Copper	0.00298 mg/l	0.00246 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Hexavalent Chromium	0.00461 mg/l	0.00154 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzene	0.0235 mg/l	0.0059 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (a) Pyrene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (k) Fluoranthene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Benzo (b) Fluoranthene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Dibenzo (a,h) Anthracene	0.000036 mg/l	0.000018 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave



## Appendix D - Platform Specific Requirements for Chlorine in Cooling Water and Fire Control System Test Water Discharges

The effluent limitations for chlorine in the following tables are applicable following initial dilution in the mixing zone defined in Part V of the general permit. Compliance with the limits shall be determined through the use of the following equation:

$$C_o = C_e / (1 + D_m)$$

Where  $C_o$  = the concentration at the edge of the mixing zone,  
 $C_e$  = the end-of-pipe concentration prior to dilution, and  
 $D_m$  = the dilution ratio expressed in parts seawater per part wastewater.

On the Discharge Monitoring Report (DMR) required by Part III.C of the general permit, the permittee shall report post-dilution results ( $C_o$ ) so as to be directly comparable to the effluent limits in the tables. The end-of-pipe sampling result ( $C_e$ ) and  $D_m$  shall be submitted as a supplement to the DMR.

For Platforms Gail, Harvest, Hermosa and Hidalgo, the following effluent limitations and monitoring requirements for chlorine apply to both cooling water and fire control system test water. For Platforms Grace and Irene, the requirements only apply to fire control system test water.

For each platform, the quarterly monitoring requirements below shall commence in the first full monitoring quarter for the platform, subsequent to November 30, 2009, as set forth in Part III.C of the general permit.

Platform	Maximum Daily Limit	Average Monthly Limit	Measurement Frequency	Sample Type	Reported Values
Gail	0.013 mg/l	0.00565 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Grace	0.013 mg/l	0.00452 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Harvest	0.011 mg/l	0.0065 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Hermosa	0.0124 mg/l	0.0061 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Hidalgo	0.013 mg/l	0.00505 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave
Irene	0.013 mg/l	0.00539 mg/l	Once/quarter	Grab	Daily Max and Monthly Ave

